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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,146	12/21/2001	Thomas N. Turba	RA 5409 (33012/327/101)	2341

27516 7590 06/09/2006

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EXAMINER

LU, KUEN S

ART UNIT PAPER NUMBER

2167

DATE MAILED: 06/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/028,146

Applicant(s)

TURBA, THOMAS N.

Examiner

Kuen S. Lu

Art Unit

2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 13, 2006 has been entered.

2. This Action is responsive to Applicant's Amendments, filed on April 10, 2006. Examiner acknowledged amendments made to claims 1 and 11. As for Applicant's Remarks on claim rejections, filed April 10, 2006, has been fully considered by Examiner. Please see discussion in the section ***Response to Arguments***, following the Action for non-Final Rejection, as shown next.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3.1. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers et al. (U.S. Patent 6,604,135 B1, hereafter "Rogers") in view of Roth (U.S. Patent Application 2003/0041053) and Warshavsky et al. (U.S. Patent 6,732,095, hereafter "Warshavsky").

As per claim 1, Rogers teaches "In a data processing system having a user terminal which generates a service request to define desired data processing services coupled

to a data base management system which provides said desired data processing services" via "a publicly accessible digital data communication network" (See Fig. 7 and col. 5, lines 20-35 and col. 13, lines 49-62 wherein Rogers' web server with control program agent, via an area network, supports web browser's request for services running on a web client, a user terminal).

Rogers does not explicitly teach that the data processing service are provided "by execution of an ordered sequence of native command language script".

However, Roth teaches providing data services to user's service request at Page 4, [0056] where query in structured data language, such as XML, is generated and forwarded to database server for execution to retrieve data.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine the teaching of Roth with Rogers reference because both references are directed to retrieving data on a client/server/network environment by browsing and the combined teaching of the references would have enabled Rogers' system to an optimized database search to access and retrieve large amount of data from public databases with much reduced time surfed where greater and more effective usage of information residing on servers on heterogeneous network is always a great concern.

The combined teaching of Roth and Rogers references further teaches the following improvement:

"a. a customized user interface having a plurality of components wherein at least one of said plurality of components is stored within said user terminal and at least another one of said plurality of components is stored within and transferred via said publicly accessible digital data communication network from said data base management system to said user terminal" (See Rogers: Fig. 2 and col. 11, line 63 – col. 12, line 19

where a client system is coupled to a server with home page stored and displayed, and image objects are pending for user to click for downloading to display is equivalent to Applicant's a customized user interface having a plurality of components wherein at least one of said plurality of components is stored within said user terminal and at least another one of said plurality of components is stored within and transferred via said publicly accessible digital data communication network from said data base management system); and

"b. a document containing a plurality of elements formatted in XML, extensible markup language, generated by said user terminal utilizing said customized user interface and transferred from said user terminal to said data base management system which contains said service request" (See Roth: Page 4, [0056] where a stored XML module, based on specified and requested criteria, formats a query in structured data language, XML in the client computer's user interface and sends the XML query to the XML send/receive module of the database server is equivalent to Applicant's a document containing a plurality of elements formatted in XML generated by said user terminal utilizing said customized user interface and transferred from said user terminal to said data base management system which contains said service request).

The combined teaching of the Roth and Rogers references does not explicitly teach "e. an XML mapping tree responsively coupled to said data base management system which parses said XML document into said input format of said data base management system which involves said native script which is executed by said data base management system to honor said service request".

However, Warshavsky teaches "e. an XML mapping tree responsively coupled to said data base management system which parses said XML document into said input format of said data base management system which involves said native script which is

executed by said data base management system to honor said service request” (See Fig. 1, col. 4, lines 52-57 and col. 5, lines 4-5 and 46-54 where the metadata of XML mapping definition is stored in allocation, such as repository, and the definition is of hierarchical structure whose entities represented by one to many relationships between objects, components and fields for converting XML document into columns of a record in a relational table is equivalent to Applicant’s an XML mapping tree stored within said data base management system via which the transformation of each of said plurality of elements is defined which permits conversion of said document to said ordered sequence of native command language script).

It would have been obvious to one having ordinary skill in the art at the time of the applicant’s invention was made to combine the teaching of Warshavsky with Roth and Rogers references because the references are devoted retrieving data on a client/server/network environment by browsing and further directed to relational database data conversions and the combined reference would have enabled a complete web-based system to invoke a seamless bi-directional flow of XML documents between application and database. Further, the system would have been enhanced with composite query composition capability to efficiently transform data between relational and XML representations.

As per claim 6, Rogers teaches the following “An apparatus” (See Fig. 7 and col. 9, lines 24-30 where a client computer is coupled to a server for connecting different databases) comprising:

“a. a user terminal having a customized user interface wherein a portion of said customized user interface is not resident within said user terminal” (See Fig. 7 and col. 5, lines 20-35 and col. 13, lines 49-62 wherein Rogers’ web server with control program

agent, via an area network, supports web browser's request for services running on a web client, a user terminal is equivalent to Applicant's a user terminal having a customized user interface wherein a portion of said customized user interface is not resident within said user terminal).

Rogers does not explicitly teach "b. an XML document which describes a service request defining a database management process generated by said user terminal utilizing said customized user interface".

However, Roth teaches "b. an XML document which describes a service request defining a database management process generated by said user terminal utilizing said customized user interface" (See Fig. 1 and Page 4, [0056] where query in structured data language, such as XML, is generated at the client system's XML send/receive module and sent to database server for execution to retrieve data is equivalent to Applicant's an XML document which describes a service request defining a database management process generated by said user terminal utilizing said customized user interface).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine the teaching of Roth with Rogers reference because both references are directed to retrieving data on a client/server/network environment by browsing and the combined teaching of the references would have enabled Rogers' system to an optimized database search to access and retrieve large amount of data from public databases with much reduced time surfed where greater and more effective usage of information residing on servers on heterogeneous network is always a great concern.

The combined teaching of Roth and Rogers references further teaches the following:

"c. a publicly accessible digital data communication network" (See Fig. 7 where DIS local area network is equivalent to Applicant's a publicly accessible digital data communication network);

"d. a data base management system having an input format different from XML which involves a native script which is executed by said data base management system to honor said service request responsively coupled to said publicly accessible digital data communication network which transfers said portion of said customized user interface not resident within said user terminal to said user terminal and which receives said XML document via said publicly accessible digital data communication network" (See Rogers: Fig. 7 and col. 13, line 51 – col. 14, line 4 where a control program agent, implemented with C language for providing run code for web server for connections to database sources is equivalent to Applicant's a data base management system having an input format different from XML which involves a native script which is executed by said data base management system to honor said service request responsively coupled to said publicly accessible digital data communication network which transfers said portion of said customized user interface not resident within said user terminal to said



user terminal and which receives said XML document via said publicly accessible digital data communication network).

The combined teaching of the Roth and Rogers references does not explicitly teach "c. an XML mapping tree stored within said data base management system via which the transformation of each of said plurality of elements is defined which permits conversion of said document to said ordered sequence of native command language script".

However, Warshavsky teaches "c. an XML mapping tree stored within said data base management system via which the transformation of each of said plurality of elements is defined which permits conversion of said document to said ordered sequence of native command language script" (See Fig. 1, col. 4, lines 52-57 and col. 5, lines 4-5 and 46-54 where the metadata of XML mapping definition is stored in allocation, such as repository, and the definition is of hierarchical structure whose entities represented by one to many relationships between objects, components and fields for converting XML document into columns of a record in a relational table is equivalent to the Applicant's an XML mapping tree stored within said data base management system via which the transformation of each of said plurality of elements is defined which permits conversion of said document to said ordered sequence of native command language script).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine the teaching of Warshavsky with Roth and Rogers references because the references are devoted retrieving data on a client/server/network environment by browsing and further directed to relational database data conversions and the combined reference would have enabled a complete web-based system to invoke a seamless bi-directional flow of XML documents

between application and database. Further, the system would have been enhanced with composite query composition capability to efficiently transform data between relational and XML representations.

As per claim 11, Rogers teaches a method “to define a service request to a data base management system” (See Abstract where client browser fulfills request for retrieving data from databases).

However, Rogers does not explicitly teach the method “using an XML document” to request data from database and the database “having an incompatible input protocol including an ordered sequence of command language statements for execution by said data base management system to honor said service request”.

However, Roth teaches “using an XML document” to request data from database (See Page 4, [0056] where query in structured data language, such as XML, is generated and forwarded to database server for execution to retrieve data) and the database “having an incompatible input protocol including an ordered sequence of command language statements for execution by said data base management system to honor said service request” (See Page 4, [0056] where query in structured data language, such as XML, is generated and forwarded to database server for execution to retrieve data).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine the teaching of Roth with Rogers reference because both references are directed to retrieving data on a client/server/network environment by browsing and the combined teaching of the references would have enabled Rogers' system to an optimized database search to access and retrieve large amount of data from public databases with much reduced time surfed where greater

and more effective usage of information residing on servers on heterogeneous network is always a great concern.

The combined teaching of Roth and Rogers references further teaches the following:

"a. transferring a portion of a customized user interface to a user terminal from said database management system" (See Rogers: Fig. 7 and col. 5, lines 20-35 and col. 13, lines 49-62 wherein Rogers' web server with control program agent, via an area network, supports web browser's request for services running on a web client, a user terminal is equivalent to Applicant's transferring a portion of a customized user interface to a user terminal);

"b. creating said XML document by said user terminal using said customized user interface" (See Roth: Fig. 1 and Page 4, [0056] where query in structured data language, such as XML, is generated at the client system's XML send/receive module and sent to database server for execution to retrieve data is equivalent to Applicant's creating said XML document by said user terminal using said customized user interface); and

"c. transferring said XML document defining said service request to said data base management system via a publicly accessible digital data communication network" (See Roth: Fig. 1 and Page 4, [0056] where query in structured data language, such as XML, is generated at the client system's XML send/receive module and sent to database server for execution to retrieve data is equivalent to Applicant's c. transferring said XML document defining said service request to said data base management system via a publicly accessible digital data communication network).

The combined teaching of the Roth and Rogers references does not explicitly teach

"d. parsing said XML document into an XML mapping tree".

However, Warshavsky teaches "d. parsing said XML document into an XML mapping tree" (See Fig. 1, col. 4, lines 52-57 and col. 5, lines 4-5 and 46-54 where the metadata of XML mapping definition is stored in allocation, such as repository, and the definition is of hierarchical structure whose entities represented by one to many relationships between objects, components and fields for converting XML document into columns of a record in a relational table is equivalent to the Applicant's an XML mapping tree stored within said data base management system via which the transformation of each of said plurality of elements is defined which permits conversion of said document to said ordered sequence of native command language script).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine the teaching of Warshavsky with Roth and Rogers references because the references are devoted retrieving data on a client/server/network environment by browsing and further directed to relational database data conversions and the combined reference would have enabled a complete web-based system to invoke a seamless bi-directional flow of XML documents between application and database. Further, the system would have been enhanced with composite query composition capability to efficiently transform data between relational and XML representations.

Roth further teaches "e. presenting said parsed XML document as said ordered sequence of command language statements to said data base management system for processing by execution" (See Roth: Fig. 1 and Page 4, [0056] where query in structured data language, such as XML, is generated at the client system's XML send/receive module and sent to database server for execution to retrieve data is equivalent to Applicant's presenting said parsed XML document as said ordered

sequence of command language statements to said data base management system for processing by execution).

As per claim 16, Rogers teaches an apparatus comprising a creating means for “defining a service request utilizing a customized user interface” (See Abstract and Fig. 2 and col. 11, line 63 – col. 12, line 19 where a client system is coupled to a server with home page stored and displayed, and image objects are pending for user to click for downloading to display).

However, Rogers does not explicitly teach the apparatus “creating an XML document” utilizing the customized user interface.

However, Roth teaches “using an XML document” to request data from database (See Page 4, [0056] where query in structured data language, such as XML, is generated and forwarded to database server for execution to retrieve data).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine the teaching of Roth with Rogers reference because both references are directed to retrieving data on a client/server/network environment by browsing and the combined teaching of the references would have enabled Rogers' system to an optimized database search to access and retrieve large amount of data from public databases with much reduced time surfed where greater and more effective usage of information residing on servers on heterogeneous network is always a great concern.

The combined teaching of Roth and Rogers references further teaches the following:  
“b. transmitting means responsively coupled to said creating means for transmitting said XML document defining said service request” (See Roth: Page 4, [0056] where a stored XML module, based on specified and requested criteria, formats a query in

structured data language, XML in the client computer's user interface and sends the XML query to the XML send/receive module of the database server is equivalent to Applicant's transmitting means responsively coupled to said creating means for transmitting said XML document defining said service request); and

"c. providing means responsively coupled to said transmitting means for providing data base management functions to honor said service request and for providing a portion of said customized user interface to said creating means" (See Roth: Fig. 1 and Page 4, [0056] where query in structured data language, such as XML, is generated at the client system's XML send/receive module and sent to send/receive module of database server for execution to retrieve data and return to the client via the modules is equivalent to Applicant's providing means responsively coupled to said transmitting means for providing data base management functions to honor said service request and for providing a portion of said customized user interface to said creating means).

The combined teaching of the Roth and Rogers references does not explicitly teach "d. composing means responsively coupled to said providing means for composing said XML document from an XML mapping tree and data said data base management system".

However, Warshavsky teaches "d. composing means responsively coupled to said providing means for composing said XML document from an XML mapping tree and data said data base management system" (See Fig. 1, col. 4, lines 52-57 and col. 5, lines 4-5 and 46-54 where the metadata of XML mapping definition is stored in allocation, such as repository, and the definition is of hierarchical structure whose entities represented by one to many relationships between objects, components and fields for converting XML document into columns of a record in a relational table is equivalent to the Applicant's an XML mapping tree stored within said data base

management system via which the transformation of each of said plurality of elements is defined which permits conversion of said document to said ordered sequence of native command language script).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine the teaching of Warshavsky with Roth and Rogers references because the references are devoted retrieving data on a client/server/network environment by browsing and further directed to relational database data conversions and the combined reference would have enabled a complete web-based system to invoke a seamless bi-directional flow of XML documents between application and database. Further, the system would have been enhanced with composite query composition capability to efficiently transform data between relational and XML representations.

As claims 2, 8, 14 and 18, Warshavsky further teaches "wherein at least one of said plurality of elements further comprises an attribute which is recorded within said XML mapping tree" (See col. 1, lines 35-49 where XML elements comprise attributes may be in name/value pairs appear in the elements is equivalent the Applicant's at least one of said plurality of elements further comprises an attribute which is recorded within said XML mapping tree).

As per claims 3 and 13, Warshavsky further teaches "document is defined by a Document according to claim 2 wherein said Type Definition, DTD" (See col. 1, lines 50-57 where DTD and XLM schema is the metadata to define the structure of XML

document is equivalent to Applicant's document is defined by a Document according to claim 2 wherein said Type Definition, DTD).

As per claims 4, 7, 12 and 17, Warshavsky further teaches "comprising a storage space within said data base management system in which said XML mapping tree is stored for future use" (See Fig. 1, col. 4, lines 52-57 and col. 5, lines 4-5 and 46-54 where the metadata of XML mapping definition is stored in allocation, such as repository).

As per claims 5 and 20, the combined teaching of Warshavsky, Roth and Rogers further teaches "said XML mapping tree is transferred to said user terminal" (See Roth: Page 4, [0056] and Page 7, [0082] where query in XML is transferred from client computer to database server via XML send/receive modules, and XML result is displayed, and Warshavsky: col. 4, lines 50-57 and col. 5, lines 46-54 where a metadata schema is proposed to create XML mapping definition and XML schema of XML document is displayed).

As per claims 9, 15 and 19, Roth further teaches "wherein said publicly accessible digital data communication system further comprises the Internet" (See Roth further teaches "wherein said publicly accessible digital data communication system further comprises the Internet" (See Page 5, [0061] where XML is implemented on Internet to query relational database).

As per claim 10, Warshavsky further teaches "wherein said XML mapping tree is hierarchical" (See col. 1, lines 50-57 and col. 4, lines 52-57 where XML documents is



hierarchically structured and its metadata XML mapping definition maps XML document and relational data).

**3.2.** Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers et al. (U.S. Patent 6,604,135 B1, hereafter "Rogers") in view of Roth (U.S. Patent Application 2003/0041053).

As per claim 21, Rogers teaches an apparatus "for controlling a legacy database management system" (See Fig. 7 and col. 13, line 51 – col. 14, line 4 where a control program agent, implemented with C language for providing run code for web server for connections to database sources. Please note Examiner interprets any established database under maintenance mode is a legacy database system).

Rogers does not explicitly teach controlling the database by "using XML message".

However, Roth teaches providing data services to user's service request at Page 4, [0056] where query in structured data language, such as XML, is generated and forwarded to database server for execution to retrieve data.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine the teaching of Roth with Rogers reference because both references are directed to retrieving data on a client/server/network environment by browsing and the combined teaching of the references would have enabled Rogers' system to an optimized database search to access and retrieve large amount of data from public databases with much reduced time surfed where greater and more effective usage of information residing on servers on heterogeneous network is always a great concern.

The combined teaching of Roth and Rogers references further teaches the following:

“a. a user terminal having a customized user interface with which said user terminal generates a database management system service request as said XML message” (See Roth: Fig. 1 and Page 4, [0056] teaches providing user's service request where query in structured data language, such as XML, is generated at the client's terminal and forwarded to database server for execution to retrieve data via XML send/receive modules between client and server is equivalent to Applicant's a user terminal having a customized user interface with which said user terminal generates a database management system service request as said XML message);

“b. said legacy database management system responsively coupled to said user terminal via a publicly accessible digital data communication network which stores components of said customized user interface and which transfers said components of said customized user interface to said user terminal for generating said service request as said XML message and which honors said service request by executing an ordered sequence of command language script” (See Roth: Fig. 1 and Page 4, [0056] where modules stored in client computer and server system utilizing XML send/receive modules to format query, transfer query and retrieve/transmit data from server is equivalent to Applicant's said legacy database management system responsively coupled to said user terminal via a publicly accessible digital data communication network which stores components of said customized user interface and which transfers said components of said customized user interface to said user terminal for generating said service request as said XML message and which honors said service request by executing an ordered sequence of command language script); and

“a conversion facility responsively coupled to said legacy database management system which parses said XML message to produce said ordered sequence of

command language script" (See Roth: Figs. 1 and 5, Page 4, [0057] and Page 7, [0089] where XML query is translated into SQL query statements).

As per claim 22, Roth further teaches "where said XML message further comprises a plurality of elements" (See Page 7, [0085] where user search criteria is embedded within XML tags is equivalent the Applicant's XML message further comprises a plurality of elements).

**3.3.** Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers et al. (U.S. Patent 6,604,135 B1, hereafter "Rogers") in view of Roth (U.S. Patent Application 2003/0041053), as applied to claims 21-22 above, and further in view of Warshavsky et al. (U.S. Patent 6,732,095, hereafter "Warshavsky").

As per claim 23, the combined teaching of Roth and Rogers references teaches converting XML message to generate command language script to retrieve data from databases as previously described in claims 21-22 rejections.

The combined teaching does not explicitly teach "said conversion facility further comprises an element to source mapping tree".

However, Warshavsky teaches "said conversion facility further comprises an element to source mapping tree" (See col. 4, lines 52-57 where each definition in the XML Mapping Definitions is an element to the mapping tree).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine the teaching of Warshavsky with Roth and Rogers references because the references are devoted retrieving data on a client/server/network environment by browsing and further directed to relational

database data conversions and the combined reference would have enabled a complete web-based system to invoke a seamless bi-directional flow of XML documents between application and database. Further, the system would have been enhanced with composite query composition capability to efficiently transform data between relational and XML representations.

As per claim 24, Warshavsky further teaches "comprising a storage space within said data base management system in which said XML mapping tree is stored for future use" (See Fig. 1, col. 4, lines 52-57 and col. 5, lines 4-5 and 46-54 where the metadata of XML mapping definition is stored in allocation, such as repository).

As per claim 25, Roth further teaches "wherein said publicly accessible digital data communication system further comprises the Internet" (See Page 5, [0061] where XML is implemented on internet to query relational database).

#### 4. The prior art made of record

- H. U.S. Patent 6,604,135
- I. U.S. Publication 2003/0041053
- G. U.S. Patent 6,732,095

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- A. U.S. Publication 2002/0123993
- B. U.S. Publication 2002/0156811
- C. U.S. Publication 2002/0078768
- D. U.S. Publication 2003/0191769

E. U.S. Patent 6,480,860

F. U.S. Patent 6,604,100

***Response to Arguments***

5. Applicant's arguments, filed on April 10, 2006, with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection.

***Contact Information***

6. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Kuen S. Lu whose telephone number is (571) 272-4114. The examiner can normally be reached on Monday-Friday (8:30 am - 5:30 pm). If attempts to reach the examiner by telephone pre unsuccessful, the Examiner's Supervisor, John Cottingham, can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for Page 13 Published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).

Kuen S. Lu



Patent Examiner

June 3, 2006



JOHN R. COTTINGHAM  
PRIMARY EXAMINER

